

### **REMARKS**

The Office Action dated November 17, 2004 has been received and carefully noted. The above amendments to the claims and the following remarks, are submitted as a full and complete response thereto.

Claim 1 is amended to more particularly point out and distinctly claim the subject matter of the invention. Claims 2 and 6 are cancelled. Claims 14 and 15 are rewritten in independent form. No new matter has been added and no new issues are raised which require further consideration and or research. Claims 1, 3-5 and 7-15 are respectfully submitted for consideration.

Applicants are grateful for the indication that claims 14 and 15 contain allowable subject matter, and would be allowable if amended to be in independent form. Accordingly, claims 14 and 15 are rewritten in independent form including the base claim from which they depend. Thus, it is respectfully submitted that claims 14 and 15 are reconditioned for allowance.

The Office Action rejects claims 1-15 under 35 U.S.C. §103(a) as being obvious over U.S. Patent Number 6,318,174 to Schmiesing et al. (Schmiesing), in view of U.S. Patent Number 6,404,028 to Hetrick et al. (Hetrick). These rejections are respectfully traversed. It is respectfully submitted that the rejection of claims 2 and 6 are moot in light of the cancellation of these claims.

The Office Action takes the position that Schmiesing discloses all the elements of the claimed invention with the exception of protrusions that are coated

with a diamond-like coating. Hetrick is cited as curing the deficiencies of Schmiesing and the Office Action took the position that it would have been obvious to a person with ordinary skill in the art to combine Schmiesing and Hetrick to produce the claimed invention.

Claim 1, upon which claims 3-5 and 7-13 depend, recites a positive acceleration sensor. The sensor comprises at least one pair of electrodes. The pair of electrodes comprised the removable electrode responsive to the acceleration, and at least one stationary electrode. The sensor further comprises at least one isolator protrusion being coated with a diamond like DLC coating. The isolator protrusion further comprises a two layer composite structure with a base layer that consists of oxide and the base layer coated with the top layer of the diamond-like DLC.

As discussed in the present specification the present invention produces an acceleration sensor that is more durable and better resists the wear caused by overload situations. This is affected by coating protrusions with a diamond like substance that resists sticking of the movable and fixed electrode, and reduces wear. The coated protrusions provide both an isolating function as well as overload protection. It is respectfully submitted that the prior art of Schmiesing and Hetrick when viewed singly or when combined, fails to disclose or suggest all of the elements of any of the presently pending claims. Therefore, the prior art fails to provide the critical and unobvious advantages discussed above.

Schmiesing discloses an acceleration sensor, with a moveable electrode 120 and a fixed electrode 170. Figure 1 of Schmiesing discloses protrusions 125 on the moveable electrode 120 and protrusions 171 on fixed electrode 170.

The Office Action admits that Schmiesing lacked the detail of two layer composite structure including the base layer and a top layer of diamond-like coating, and alleges that Hetrick makes up for this deficiency. Then, regarding claim 6 the Office Action on page 4 alleges that Schmiesing discloses that the protrusions (125, 171), and that its sacrificial layers (600, 620) are composed of silicone dioxide. Thus, the Office Action further asserts that Figure 1 of Schmiesing discloses that the protrusions are made of silicone dioxide.

It is respectfully submitted that the applied references failed to disclose or suggest all of the features recited in Claim 1. As discussed above, the Office Action admits that Schmiesing does not disclose the detail of the two layer composite structure. In fact, Schmiesing discloses that the protrusions (125, 171) are made of the same material as the alleged base element and does not in any way suggest the feature of a two-layer composite structure. Thus, Schmiesing can not disclose a protrusion comprised of a base layer made of oxide, and coated with a diamond-like DLC, as recited in claim 1.

Schmiesing merely discloses sacrificial layers 620 and 600 that are comprised of silicone dioxide (see column 5 lines 63-column 6 line 2). These layers are deposited over layer 320. Thus, the sacrificial layers could not be a base layer

as alleged in the Office Action. Further, Schmiesing, in the portions referenced above, discloses that the silicone dioxide layers 600 and 620 are removed. Thus, the cited references either singly or in combination fail to disclose or suggest at least the feature of an isolated protrusion that has a two layer composite structure as recited in claim 1. Thus, it is respectfully submitted that the cited references cannot be combined to disclose or suggest all of the features recited in claim 1. It is further submitted that since the cited references fail to disclose or suggest all of the features recited in claim 1, that the cited combination fails to provide the advantages discussed above, including isolation and overload protection.

It is respectfully submitted that since claims 3-5 and 7-13 depend on claim 1, these claims are allowable for the same reasons as claim 1.

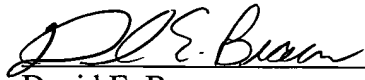
As discussed above, the Office Action indicated that claims 14 and 15 recite allowable subject matter. Accordingly, claims 14 and 15 are amended into independent form including base claim 1. Thus, claims 14 and 15 are in condition for allowance. It is further submitted that each of claims 1, 3-5 and 7-15 recite subject matter which is neither disclosed nor suggested in the cited prior art. Accordingly, it is respectfully requested that all of claims 1, 3-5 and 7-15 be allowed, in this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by

telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

  
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